



## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P13454/OLL	<b>FOR FURTHER ACTION</b> See Form PCT/PEA/416	
International application No. PCT/EP2004/001003	International filing date (day/month/year) 04.02.2004	Priority date (day/month/year) 10.02.2003
International Patent Classification (IPC) or national classification and IPC H01Q1/24, H01Q9/04, H01Q1/38, H04B1/38, H04M1/02		
Applicant SONY ERICSSON MOBILE COMMUNICATIONS AB ET AL.		
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau) a total of 1-4 sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>		
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>		
Date of submission of the demand  02.12.2004	Date of completion of this report  28.02.2005	
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer  Angrabeit, F  Telephone No. +31 70 340-2412 	

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ON PATENTABILITY**

10/544121  
JC20 Rec'd PCT/PTO 02 AUG 2005  
International application No.  
PCT/EP2004/001003

**Box No. I Basis of the report**

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
  - ☐ publication of the international application (under Rule 12.4)
  - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements\*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

**Description, Pages**

1-13 as originally filed

**Claims, Numbers**

1-23 received on 02.12.2004 with letter of 30.11.2004

**Drawings, Sheets**

1/5-5/5 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing (*specify*):
  - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing (*specify*):
  - ☐ any table(s) related to sequence listing (*specify*):

\* If item 4 applies, some or all of these sheets may be marked "superseded."

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**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

Novelty (N)	Yes: Claims	1-23
	No: Claims	
Inventive step (IS)	Yes: Claims	1-23
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-23
	No: Claims	

2. Citations and explanations (Rule 70.7):

**see separate sheet**

**Re Item V**

**Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Reference is made to the following document:

**D1:** DE 100 52 909 A (SIEMENS AG) 8 May 2002 (2002-05-08)

2. Basis for this International Preliminary Examination Report are the amended claims 1-23. As amended, there remain now the following two independent claims: claim 1 which refers to an integrated speaker carrier and antenna element for a communication terminal and claim 20 which refers to a method for producing such an integrated device.

3. The prior art reference, which is reflected in the preamble of the independent device claim 1, is given by document **D1** cited in the search report.

From this known prior art the amended device claim 1 which includes the features of original dependent claim 6 differs in that said

- an elongated second portion carrying a conductive lead extending from adjacent to said first portion to a speaker connected to an outer end of said elongated second portion, wherein said elongated second portion is bendable such that said speaker is positioned at an aperture in said portion.

Accordingly the independent method claim 1 is novel over the prior art.

4. Furthermore, the solution proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons:

The problem to be solved by the present invention may be regarded as providing a more compact antenna arrangement for a radio terminal.

However, in order for the skilled person to come up with something that falls within the scope of claim 1, when starting off from **D1**, he would have to realize the benefits of

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(SEPARATE SHEET)**

International application No.

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positioning a speaker at an aperture in the antenna film, which is non-present in **D1**, integrating the leads to the speaker with the conductive portions of the antenna element on a common film and forming the common film flexible such that the elongated portion is bendable for positioning the speaker at the aperture. Even considering **D2**, it must be concluded that there is no lead whatsoever in the cited prior art towards a solution according to claim 1.

Insofar claim 1 not only new but also inventive.

5. Independent claim 20 refers to a method for producing an integrated speaker carrier and antenna element for a communication terminal based on the technical features of claim 1. Therefore, the same reasoning applies, mutatis mutandis, to the subject-matter of this method claim. Claim 20 is therefore considered as also new and inventive in respect to the prior art.